

US008558759B1

(12) United States Patent

Prada Gomez et al.

(10) Patent No.: US 8,558,759 B1 (45) Date of Patent: Oct. 15, 2013

(54) HAND GESTURES TO SIGNIFY WHAT IS IMPORTANT

(75) Inventors: Luis Ricardo Prada Gomez, Hayward,

CA (US); Aaron Wheeler, San

Francisco, CA (US)

(73) Assignee: Google Inc., Mountain View, CA (US)

(*) Notice: Subject to any disclaimer, the term of this

patent is extended or adjusted under 35

U.S.C. 154(b) by 255 days.

(21) Appl. No.: 13/179,190

(22) Filed: Jul. 8, 2011

(51) Int. Cl. *G09G 5/00*

(2006.01)

(52) **U.S. Cl.**

USPC **345/7**; 345/156; 345/619

700/259

(58) Field of Classification Search

USPC 345/7, 8, 156, 173, 418, 619, 620, 660, 345/661; 349/11, 13; 705/14.58; 359/630; 715/716, 764, 848; 351/158; 700/258,

See application file for complete search history.

(56) References Cited

U.S. PATENT DOCUMENTS

6,771,294 B1 * 7,192,136 B2 7,255,437 B2 7,380,936 B2 7,401,918 B2 7,438,410 B1 7,481,531 B2 * 7,487,468 B2 * 7,500,746 B1 7,500,747 B2 7,543,934 B2 7,581,833 B2 7,581,833 B2	3/2007 8/2007 6/2008 7/2008 10/2008 1/2009 2/2009 3/2009 3/2009 6/2009 9/2009	Pulli et al	
, ,	9/2009 11/2009		

7,760,898 B2	7/2010	Howell et al.
7,771,046 B2	8/2010	Howell et al.
7,787,992 B2	8/2010	Pretlove et al.
7,792,552 B2	9/2010	Thomas et al.
7,806,525 B2	10/2010	Howell et al.
7,922,321 B2	4/2011	Howell et al.
7,928,926 B2*	4/2011	Yamamoto et al 345/8
8,009,141 B1*	8/2011	Chi et al 345/156
8,085,243 B2*	12/2011	Yamashita et al 345/158
8,109,629 B2	2/2012	Howell et al.
8,223,088 B1*	7/2012	Gomez et al 345/7
8,253,685 B2*	8/2012	Katayama 345/157
8,259,064 B2*	9/2012	Kato et al 345/158
2009/0300535 A1	12/2009	Skourup et al.
2010/0125812 A1	5/2010	Hartman et al.
2010/0199232 A1*	8/2010	Mistry et al 715/863
2011/0213664 A1	9/2011	Osterhout et al.
2011/0227820 A1*	9/2011	Haddick et al 345/156

FOREIGN PATENT DOCUMENTS

WO	2008027685	3/2008
WO	2010076375	7/2010

^{*} cited by examiner

Primary Examiner — Joe H Cheng (74) Attorney, Agent, or Firm — McDonnell Boehnen Hulbert & Berghoff LLP

(57) ABSTRACT

In accordance with example embodiments, hand gestures can be used to provide user input to a wearable computing device, and in particular to identify, signify, or otherwise indicate what may be considered or classified as important or worthy of attention or notice. A wearable computing device, which could include a head-mounted display (HMD) and a video camera, may recognize known hand gestures and carry out particular actions in response. Particular hand gestures could be used for selecting portions of a field of view of the HMD, and generating images from the selected portions. The HMD could then transmit the generated images to one or more applications in a network server communicatively connected with the HMD, including a server or server system hosting a social networking service.

39 Claims, 16 Drawing Sheets

